

# 2013 City of Austin Google Fiber Community Connections Program Application and Instructions

Google has announced plans to bring Google Fiber to Austin residents. The plan calls for building an ultra, high speed broadband network with Internet speeds of one gigabit per second, up to 100 times faster than normal to Austin's homes.

Google has agreed to provide up to 100 sites with broadband Internet services through its fiber network free of charge until April 8, 2023 in addition to City Hall and the new Central Library. These Community Connections will be to public or non-profit sites in the City of Austin that provide access and services directly to Austinites through what is being called the Community Connections program. Under the agreement with Google Fiber, the City of Austin will create the proposed list of sites for the program.

It is the City Council's goal to ensure an application and selection process that is transparent, available to all, and utilizes a clear set of [selection criteria](#) adopted by the City Council. Community Connections aims to provide fiber speed internet access directly to the public and will serve for innovation and digital inclusion, resulting in advancements unique to Austin's spirit.

Attached is the Community Connections Site Application, which is due by September 30, 2013.

Please direct questions to the City's Telecommunications & Regulatory Affairs Office at [digital.inclusion@austintexas.gov](mailto:digital.inclusion@austintexas.gov) or 512-974-2999.

For more information and application: [austintexas.gov/digitalinclusion](http://austintexas.gov/digitalinclusion)

Thank you for your consideration.



## Community Connections Site Selection Application Form

The City of Austin will propose **100** public or non-profit organizations to receive Google Fiber connections at their locations.

### Application Packet

In order to be considered for selection, please submit the following items:

- **General Application Form.** Complete this form (ensuring that it is signed and dated).
- **Criteria Form. Complete this form as fully as possible.** If the organization offers services at more than one location, the applicant should complete the Criteria Form for each location and prioritize the single location that will benefit the most from having a gigabit of service.

### Application Submission

All applications are due in the Office of Telecommunications & Regulatory Affairs (TARA) before **4:45 p.m. on Friday, September 30, 2013**. Late applications will not be considered.

Submissions may be submitted by email or snail mail to:

Email: [digital.inclusion@austintexas.gov](mailto:digital.inclusion@austintexas.gov)

Address: City of Austin - Municipal Building -124 W. 8<sup>th</sup> Street, Suite 210, Austin, Texas 78701

Phone: 512.974.2999

### Application Review Process

#### *Community Applications*

- August 26, 2013 - Community Site Applications Available
- September 30, 2013 - Deadline for Site Applications for Community Connections
- October 1-31, 2013 - Staff Review & Assessment

#### *Site List Adoption*

- November 6, 2013 – Community Tech & Telecommunications Commission - Discussion & Input
- November 13, 2013 – Emerging Technology & Telecommunications Council Committee - Discussion & Recommendation to Council
- November 21, 2013 - Council Discussion & Adoption of Community Connection Site List
- End of 2013 - Google Fiber requested deadline for Community Connection Site List from City

### Privacy Statement

This information is being collected and will be used to assist in determining your organization's eligibility and qualification for receiving a community connection on the City's proposed site list. This information provided may be published by the City. Any information collected, assembled, or maintained by or for a governmental body is subject to the Public Information Act.

## Community Connections General Application Form

*(Please complete this portion of application only once per organization if submitting for multiple sites)*

<b>General Application Form</b>		
<b>Applicant Organization Name:</b> Pecan Street, Inc.		
<b>Alias/DBA:</b> Pecan Street, Inc.		
<b>Program Name for Google Fiber Connection:</b> Pike Powers Lab		
<b>Organization Mission and Purpose:</b> <p>Pecan Street's mission is to promote social welfare, lessen the burdens of government and conduct scientific research in connection with establishing Austin, Texas as America's clean energy laboratory for developing clean, cost effective and efficient methods of energy production and delivery. Our goal is to accomplish this mission by, among other things, conducting and facilitating research aimed at designing and testing a sustainable business model that relies on locally produced, user-managed, clean energy.</p>		
<b>Organization Website:</b> <a href="http://www.pikepowerslab.com">www.pikepowerslab.com</a> <a href="http://www.pecanstreet.org">www.pecanstreet.org</a>		
<b>Contact Name:</b> Fisayo Fadelu		
<b>City:</b> Austin	<b>State:</b> Texas	<b>Zip:</b> 78759
<b>Phone:</b> 512-691-9021	<b>Email:</b> <a href="mailto:ffadelu@pikepowerslab.com">ffadelu@pikepowerslab.com</a>	
<b>Location(s) applying for site selection (including physical address of location) and how long your organization plans on being at each location:</b> <p>The Pike Powers Laboratory is located at: 3924, Berkman Drive, Austin, TX, 78723. This is our permanent location, therefore, the laboratory will be at this location indefinitely.</p>		
<b>Type of Organization:</b> <input checked="checked" type="checkbox"/> Non-Profit <input type="checkbox"/> Public Entity		
<b>Number of years in operation:</b> 4 Years	<b>Number of employees at location:</b> 19	

## Community Connections Criteria Form

*(Please complete this portion of application for each location in an electronic document and please explain each response, 1000 words maximum per response, please)*

### Criteria Form

Please include location if applying for more than one location:

#### Organization

1. What is your agency's vision? *(response required for all agencies)*

Pecan Street's vision is to re-imagine Austin's energy distribution system in a way that can support and accelerate the installation and management of smarter and cleaner electricity services. This involves pioneering new thinking on energy issues such as the integration of clean distributed generation, storage, demand response, energy efficiency, pricing/rate models, and other technical and economic issues.

2. What is your agency's mission and purpose? *(response required for all agencies)*

Pecan Street's mission is to promote social welfare, lessen the burdens of government and conduct scientific research in connection with establishing Austin, Texas as America's clean energy laboratory for developing clean, cost effective and efficient methods of energy production and delivery. Our goal is to accomplish this mission by, among other things, conducting and facilitating research aimed at designing and testing a sustainable business model that relies on locally produced, user-managed, clean energy.

3. Please list your organization's affiliations, community partnerships, certifications, and/or accreditations. *(response required for all agencies)*

The following companies are members of Pecan Street's Industry Advisory Council: LG, Intel, Green Mountain Energy, Lockheed Martin, GM/OnStar, Sun Edison, Oncor, Dell, Landis+Gyr, Texas Gas, Freescale, PARC, 3M, Schneider, Austin Energy, Siemens, and San Diego Gas & Electric Company.

4. What is the total number of unduplicated clients served by your organization at this location last fiscal year? *(response required for non-profit agencies only)*

The Pike Powers Laboratory and Center for Commercialization opened on June 11<sup>th</sup>, 2013. This location only started serving clients this fiscal year. Since the laboratory opening, we have served three clients on an on-going contract basis.

5. Briefly provide an overview of your organization and the services it offers. *(response required for all agencies)*

Pecan Street, Inc. is a nonprofit, university-based research and development organization focused on developing and testing advanced technology, business model and customer behavior surrounding advanced energy management systems. The organization is comprised of two divisions: the Pecan Street Research Institute, and the Pike Powers Laboratory and Center for Commercialization.

1. The *Pecan Street Research Institute* is a scientific research institute, focused on advancing understanding

and solutions addressing utility system reliability, climate change, renewable energy integration and customer needs and preferences. The Institute is the nation's most significant creator of original customer energy use research data available to the research community. Pecan Street's specific research expertise consists of creating, managing, protecting, analyzing and responsibly sharing the highest quality original research data on how customers use electricity, natural gas and water in their homes and businesses.

2. The *Pike Powers Laboratory and Center for Commercialization* offers specialized capabilities for developing, testing and validating a wide range of smart grid, distributed energy and consumer electronics hardware and software.

Pecan Street's current programs fall into two categories: consumer research, and product development and testing. The specific programs currently in progress within these two categories include:

- *Consumer electricity use research - single family*  
Funded in part by the Department of Energy's Smart Grid Demonstration grant and in partnership with Industry Advisory Council members, Pecan Street has developed the nation's deepest dataset on whole home and appliance-level energy use in single-family homes. This dataset continues to grow as new volunteers are added to the project. Members of the Pecan Street Research Consortium are utilizing the curated datasets developed from this dataset to research questions of interest to industry, under the guidance of the Industry Advisory Council.
- *Consumer electricity use research - multi-family*  
Funded in part by a grant from the Verizon Foundation, Pecan Street is undertaking a nationally unique low-income, multi-family home energy research trial and demonstration program. The research trial is equipping 140 low-income apartments with energy monitoring devices and providing a mix of the apartments with smart thermostats and/or a mobile application. The testbed will create a platform to test the impacts of behavioral and technology interventions on utility bills and energy consumption. This would appear to be among the first ever — if not the very first — research in the United States on how low income apartment residents use electricity and individual appliances over the course of the day.
- *Consumer electricity use research - behavioral response*  
Pecan Street Inc. has combined its extensive customer electric use dataset with detailed sociodemographic data and additional unique datasets including energy audits, weather, internal temperature set points, consumer preferences and electric vehicle transportation patterns. Through analysis of this data and through deployment of consumer behavioral field trials, including demand response, communications and technology adoption patterns, Pecan Street Inc. is undertaking cutting edge experiments and analysis that document the most effective behavior modification tools for managing electricity delivery challenges such as peak demand and intermittent renewables.
- *Consumer electricity use research - emerging technologies*  
The Pecan Street research team seeded its unique testbed with dense deployments of emerging technologies, including residential PV, electric vehicles with Level 2 charging, home energy monitoring systems with real-time feedback and smart appliances - to enable analysis on the behavioral patterns surrounding adoption of emerging technology, use patterns once the technologies were deployed and the impacts to the owner and the utility. The research team comprised of Pecan Street staff, funded university researchers and members of the Research Consortium have published numerous documents on this topic, many of which are available on Pecan Street's 'Publications' webpage.

- *Smart Grid for Small Businesses*

In 2012, Pecan Street expanded its consumer field trials research to include small businesses. Currently, 25 businesses within Austin are enrolled in the study and Pecan Street is recruiting 25 more businesses in Boulder, Colorado. Participants are equipped with an energy monitoring system that provides real-time information on whole building and circuit-level energy use. Inclusion of small businesses in the testbed has yielded interesting new research and commercialization opportunities.

- *Smart Grid for Schools*

Building upon its expertise in field trials management, Pecan Street launched Smart Grid for Schools in 2013 at the Ann Richards School for Young Women Leaders. Through Smart Grid for Schools, Pecan Street is providing Texas schools with nationally unique access to real-time information about how they use electricity throughout the day. With this data, schools will be able to identify opportunities to save money and create leading STEM education programs. Participants in Smart Grid for Schools receive a secure energy monitoring equipment, access to an online data portal, a license to the school's data and teacher training at the Pike Powers Commercialization Lab, all at no cost to the school.

6. Describe the community issues your organization is attempting to address. Include a description of the population most at risk of experiencing the issues described. *(response required for non-profit agencies only)*

Pecan Street is attempting to address the issues of: energy efficiency, environmental protection, utility system reliability, renewable energy integration and economic development driven by domestic energy and technology.

The population most at risk for experiencing the aforementioned issues is particularly low-income single or multi-family home energy consumers, small businesses, quasi-governmental entities.

7. Describe the demographics (e.g. ethnicity, gender, age, and income levels) and geographic characteristics of the community members your organization serves. *(response required for non-profit agencies only)*

Pecan Street serves research participants in low-income housing apartments, single and multi-family home, schools, small businesses, and consumers of smart energy appliances/devices/items. Pecan Street also serves corporate entities through testing performed at the Pike Powers Laboratory and Center for Commercialization. The entities served are geographically dispersed across the city of Austin.

8. Describe your organization's accessibility (e.g. accessible main entrance, within blocks of a public bus stop, etc.). *(response required for non-profit agencies only)*

The Pike Powers Laboratory and Center for Commercialization is located in the northeast central area of the city of Austin. The area fronts I-35 between Airport Boulevard and East 51<sup>st</sup>. The building has two publicly accessible entrances with an additional secondary emergency exit.

9. If selected, how will your organization incorporate Google Fiber into the services it offers? *(response required for all agencies)*

High bandwidth internet connectivity is absolutely essential to Pecan Street's operations. Google Fiber will be our primary source of connectivity at the Pike Powers Laboratory and Center for Commercialization, and thus will be core to sustaining our services. Our clients and staff will use the Google Fiber connection on a daily basis.

10. The City of Austin requires an annual report explaining how selected organizations and the community they serve benefit from Google Fiber. If selected, how will your organization measure the impact Google Fiber has on those served by your organization? Describe evaluation methods, goals, and objectives.  
*(response required for all agencies)*

Pecan street will evaluate the impact of Google Fiber by considering: amount of cost savings, effect on data management, and number and nature of additional product/service offerings made possible as a result of having a gigabit connection. Our goals are to increase volunteer participation in our research programs, improve services available to our clients and participants, and strengthen our interactions with energy and technology industry stakeholders. After a year of using Google Fiber, we will be able to assess our performance on each of the aforementioned goals based on the measures above.

### **Community**

*(responses required for all agencies)*

1. Briefly describe how Google Fiber will enhance public participation in your organization's service.

Google Fiber will make it possible for Pecan Street to recruit more volunteers (which includes: single and multi-family home residents, schools, business and other entities in the community) to participate in its research.

2. Briefly describe how your organization promotes digital inclusion.

Simplifying energy information and communication technology for public consumption is at the core of Pecan Street's work. Our research studies are aimed at gathering public energy use data, analyzing, and making it comprehensible and accessible to consumers.

3. Will bringing Google Fiber to your organization help the underserved? Please explain.

Yes, bringing Google Fiber to Pecan Street will help the underserved. A sizable cross-section of the homes and businesses in the northeast Austin area will benefit from the presence of Google Fiber technology in the community.

4. How much of your community will benefit from the Google Fiber connection?

The northeast central Austin area, as well as, other neighborhoods across the city of Austin where our research participants reside will significantly benefit from Google Fiber at Pecan Street.

5. Briefly describe how your organization will offer a new community service as a result of the Google Fiber connection.

Our Pike Powers Laboratory and Center for Commercialization will be open for guided facility tours to community members. Additionally, with Google Fiber in our organization, our current offerings of free bi-weekly lab breakfasts will become more attractive to community stakeholders with the ability to foster digital inclusion around the city of Austin.

*(responses required for all agencies)*

1. Please describe the potential innovative applications that could be developed with a gigabit connection.

Our database of disaggregated energy data is the largest publicly available dataset, with over 5 billion energy records collected to date. Currently, we are limited as to the amount of data we are able to download and upload from our laboratory. With a gigabit connection, Pecan Street would be able to download residential energy data from over 1000 volunteers—an exponential increase from our current capacity. Additionally, we will be able to host the only disaggregated energy web portal for all of the volunteers within our study.

2. Does your organization have or foresee high bandwidth applications?

As mentioned above, we foresee high bandwidth applications that will benefit from a gigabit connection.

3. Briefly describe how your organization is interested in advancing your technology.

Pecan Street is constantly seeking partnerships with utility companies, industry leaders, and emerging disruptive technology companies in order to advance our technology offerings. Pecan Street will continue to engage utilities by offering their potential clients, third party performance testing that reduces the utility's risk in adopting new applications. We will continue to prospect technology companies and offer them a place to perform lab testing, validation testing, product development and product demonstration. Additionally, we will continue to engage start up companies and assist them with demonstrating proofs-of-concept and validating their technologies

4. Does your organization have the capacity and resources to advance your technologies? Please explain.

As mentioned above, at our Pike Powers Laboratory and Center for Commercialization, we have the capacity to develop, test and validate a wide range of smart grid, distributed energy and consumer electronics hardware and software. We also have a team of engineers with deep experience in designing, testing, manufacturing and certifying consumer electronics, semiconductors, machine tools, control systems, machine tools, medical devices and solar panels. With regards to our financial resources, we are recipients of two U.S. Department of Energy Stimulus grants that support our programs. Also, funding from donations, lab testing, data licenses, and membership dues from our industry advisory members provide resources needed to advance our technology.

**Practical Pragmatic**

*(responses required for all agencies)*

1. Will the connection help your organization financially? How?

Yes, a gigabit connection will free up financial resources currently spent on internet connection and allow us recruit more research programs participants. Also, we would have the ability to exponentially speed up the processing of our data, which translates to increased revenues from our lab activities. Google Fiber



could also potentially open up new avenues of generating data related revenues.

2. Will this be the organization's primary or secondary connection?

The Google Fiber gigabit connection will serve as the organization's primary connection at our Pike Powers Laboratory and Center for Commercialization.

3. Does your organization have (or will it have) equipment necessary to connect?

Yes, Pecan Street has the necessary equipment to utilize the Google Fiber gigabit connection. We have wireless routers for each area of the building and have the ability to purchase more equipment as necessary. at

4. Does your organization currently have access to a high bandwidth connection?

Pecan Street currently uses AT&T uverse.

### **Applicant's Statement**

I certify that answers given herein are true and complete to the best of my knowledge. I understand that false or misleading information given in my application will result in disqualification. I understand and agree that I am required to abide by City of Austin ordinances, policies and rules.

I understand if selected to receive a Google Fiber connection that the organization I represent may be required to:

  X   submit an annual report to the TARA Office explaining how the organization has benefited from the free service.

Fisayo Fadelu

Signature

9-27-2013

Date

Finance Director

Title

**Please submit this form to TARA by 4:45 p.m. on Friday, September 30, 2013.**

Email: digital.inclusion@austintexas.gov

Address: City of Austin – TARA - Municipal Building  
124 W. 8<sup>th</sup> Street, Suite 210  
Austin, Texas 78701